

What is claimed is:

1. A method for preparing a sample of plasma containing 5-azacytidine for quantitative analysis of said 5-azacytidine, the method comprising:
 - a) mixing said plasma with acetonitrile and zinc sulfate;
 - b) separating the mixture from step a) by centrifugation; and
 - c) storing the centrifuged mixture from step b) at a temperature less than or equal to about room temperature for at least about 3 hours.
2. A method for quantitating 5-azacytidine in plasma comprising:
 - a) mixing said plasma with acetonitrile and zinc sulfate;
 - b) separating the mixture from step a) into an acetonitrile layer and a plasma layer by centrifugation;
 - c) storing the centrifuged mixture from step b) at a temperature less than or equal to about room temperature for at least about 3 hours; and
 - d) measuring the amount of 5-azacytidine in said acetonitrile layer using high-performance liquid chromatography.
3. A method for preparing a sample of plasma containing 5-azacytidine for quantitative analysis of said 5-azacytidine, the method comprising:
 - a) mixing said plasma with acetonitrile and zinc sulfate;
 - b) separating the mixture from step a) into an acetonitrile layer and a plasma layer by centrifugation;
 - c) removing at least a portion of said acetonitrile layer; and
 - d) evaporating said removed acetonitrile layer to yield a residue comprising 5-azacytidine.
4. A method for quantitating 5-azacytidine in plasma comprising:
 - a) mixing said plasma with acetonitrile and zinc sulfate;
 - b) separating the mixture from step a) into an acetonitrile layer and a plasma layer by centrifugation;

- c) removing at least a portion of said acetonitrile layer;
 - d) evaporating said removed acetonitrile layer to yield a residue comprising 5-azacytidine; and
 - e) measuring the amount of 5-azacytidine in said residue.
5. The method of claim 4 wherein the residue of step d) is stored at about minus 70°C for between about 3 hours and about 14 months prior to step e).
6. The method of claim 4 wherein 5-azacytidine is measured in step e) using high-performance liquid chromatography with mass spectrometric detection.